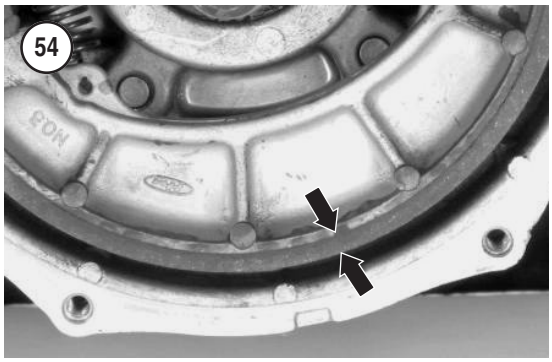
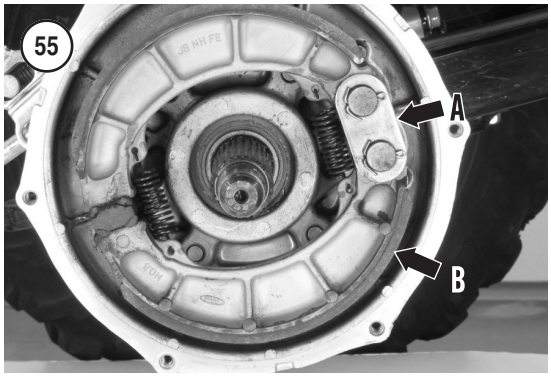




Refer to **Figure 47**.

1. Remove the rear brake drum as described in this chapter.
2. Determine rear brake shoe lining wear using the procedure in *Rear Brake Lining Check* in Chapter Three. However, always measure the brake lining thickness (**Table 2**) with a vernier caliper (**Figure 54**) after removing the brake drum to check for uneven wear. Replace both brake shoes at the same time.

CAUTION

To protect brake shoes suitable for reinstallation from oil and grease, place a clean shop cloth on the linings during removal.

NOTE

When reusing the brake shoes, mark them so they can be installed in their original mounting positions.

3. Remove the cotter pins and washer (A, **Figure 55**) and brake shoes (B).
4. Disconnect the brake shoe springs and separate the brake shoes.
5. Inspect the springs and replace them if there are any bent or unequally spaced coils.

NOTE

Always replace both springs at the same time.

6. Remove old grease from the camshaft and anchor pin surfaces.
7. Apply a light coat of high-temperature brake grease to the camshaft and anchor pins. Avoid getting any grease on the brake panel where the brake linings can make contact.
8. Install the springs onto the brake shoes.
9. Install the brake shoes onto the brake cam and anchor pins.
10. Install the washer (**Figure 56**) with its chamfered side facing toward the brake shoes.
11. Install two new cotter pins and bend their ends over to lock into place.
12. Install the rear brake drum as described in this chapter.
13. Adjust the rear brake (Chapter Three).

REAR BRAKE PANEL

The brake panel can be removed with the brake shoes attached. When servicing the brake panel, remove the brake shoes before removing the brake panel.

Refer to **Figure 47**.

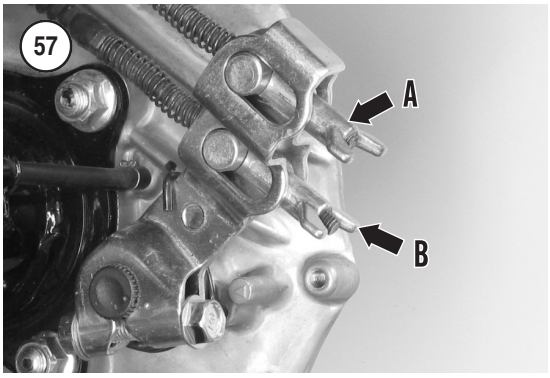
Removal/Installation

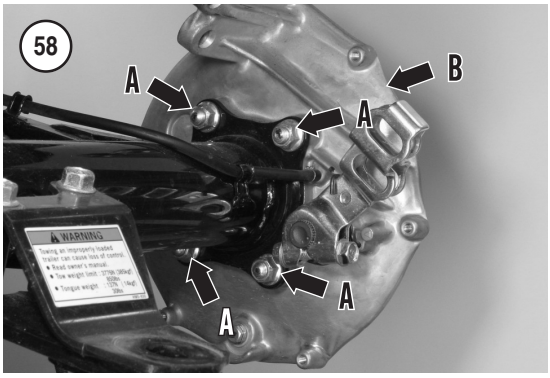
1. Remove the rear brake drum as described in this chapter.

NOTE

Brake cables can be left attached to the brake panel if brake panel service is not required.

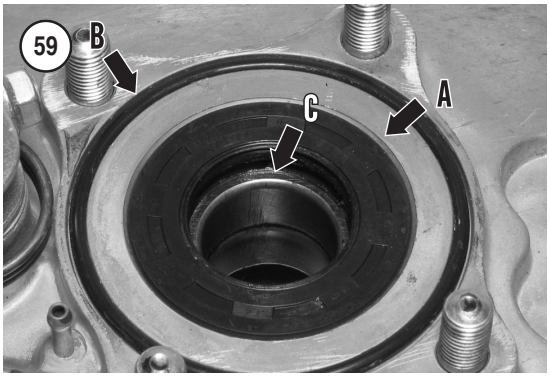
2. Unscrew the parking brake (A, **Figure 57**) and rear brake (B) adjusters from the end of the brake cables. Remove the collars and springs. Remove the brake cables from the brake panel.
3. Disconnect the vent hose from the brake panel fitting.
4. Remove the locknuts (A, **Figure 58**) and the brake panel (B). Discard the locknuts.
5. Inspect the brake panel assembly as described in this chapter.
6. Install the brake panel by reversing these removal steps, plus the following:
   a. Lubricate the dust seal lip (A, **Figure 59**) and O-ring (B) with grease.
   b. Secure the brake panel to the rear axle housing using new locknuts (A, **Figure 58**). Tighten the brake panel locknuts to 44 N•m (33 ft.-lb.).
   c. Adjust the rear brake as described in Chapter Three.





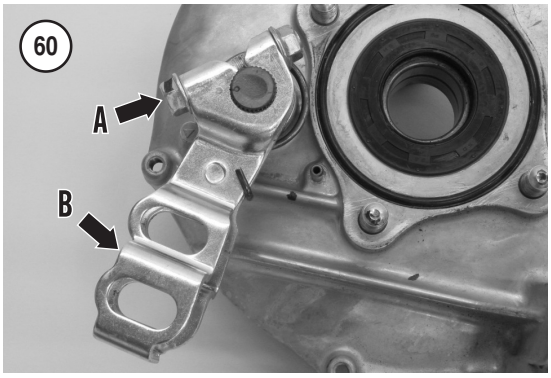
Brake Panel Inspection

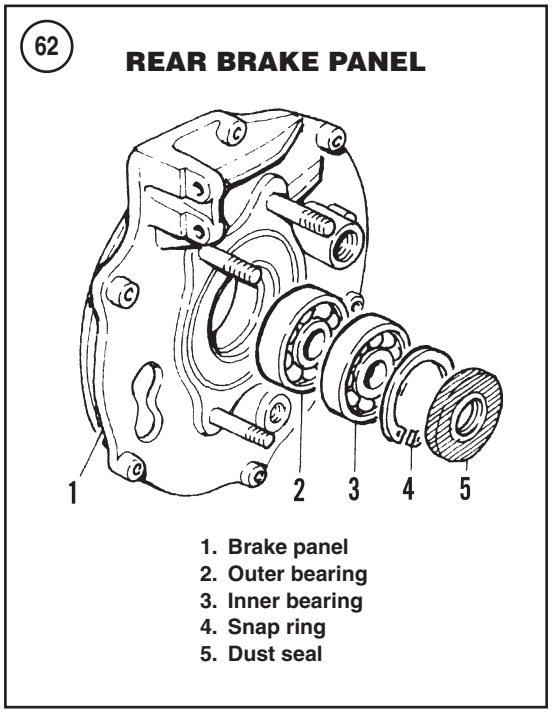
1. Service and inspect the brake cam assembly as described in this section.
2. Inspect the dust seal (A, **Figure 59**) for excessive wear or damage. Replace the dust seal as described in *Rear Axle/Brake Panel Bearing Replacement*.
3. Turn the inner race of the rear axle/brake panel bearings (C, **Figure 59**) by hand. Both bearings must turn smoothly with no roughness or binding. Also make sure the outer race of each bearing fits tightly in the brake panel. Replace both bearings as described in *Rear Axle/Brake Panel Bearing Replacement*.
4. Inspect the O-ring (B, **Figure 59**) for excessive wear or damage. Replace the O-ring if necessary.
5. Check the brake panel for cracks or other damage.



Brake Cam Removal/Inspection/Installation

The brake cam can be removed with or without the brake panel mounted on the vehicle. Refer to **Figure 47** for this procedure.
1. If the brake panel is mounted on the vehicle, disconnect the brake cables (**Figure 57**) from the brake arm.





2. Remove the brake shoes as described in this chapter.

3. Remove the brake arm nut and bolt (A, **Figure 60**).

4. Make punch marks on the brake cam and brake arm (**Figure 61**), if they are not already marked, so they can be installed in the same position.

5. Remove the brake arm (B, **Figure 60**), return spring, indicator plate and brake cam.

6. Remove the felt washer and dust seal from the brake panel.

7. Inspect the brake cam for excessive wear or damage.

8. Replace the felt washer and dust seal if it is excessively worn or damaged.

9. Inspect the return spring for cracks and other damage.

10. Apply grease to the dust seal before installing it.

11. Apply oil to the felt washer before installing it.

12. Install the dust seal and then the felt washer.

13. Lubricate the brake cam with grease and install it through the brake panel.

14. Install the return spring by hooking its end into the hole in the brake panel.

15. Install the indicator plate by aligning its wide tooth with the wide groove on the brake cam.

16. Install the brake arm (B, **Figure 60**) by aligning its punch mark with the punch mark on the brake cam (**Figure 61**). Hook the return spring onto the brake arm as shown in **Figure 60**.

17. Install the brake arm bolt and nut (A, **Figure 60**) and tighten them to 20 N•m (15 ft.-lb.). Move the brake arm by hand to make sure it moves smoothly. If there is any binding or roughness, remove and inspect the brake cam assembly.

18. Install the brake shoes as described in this chapter.

19. Reconnect the parking brake (A, **Figure 57**) and rear brake (B) cables at the brake arm.

20. Adjust the rear brake as described in Chapter Three.

Rear Axle/Brake Panel Bearing Replacement

The brake panel is equipped with a dust seal and two bearings (**Figure 62**). The bearings are identical (same part number).

1. Remove the brake shoes and brake panel as described in this chapter.

2. Remove the dust seal (A, **Figure 59**) with a wide blade screwdriver.

NOTE
If only replacing the dust seal, go to Step 8.

3. Remove the snap ring.

4. Support the brake panel in a press and press out both bearings. Discard both bearings.

5. Inspect the mounting bore for cracks, galling or other damage. Clean the mounting bore thoroughly.

6. Inspect the snap ring groove for cracks or other damage.

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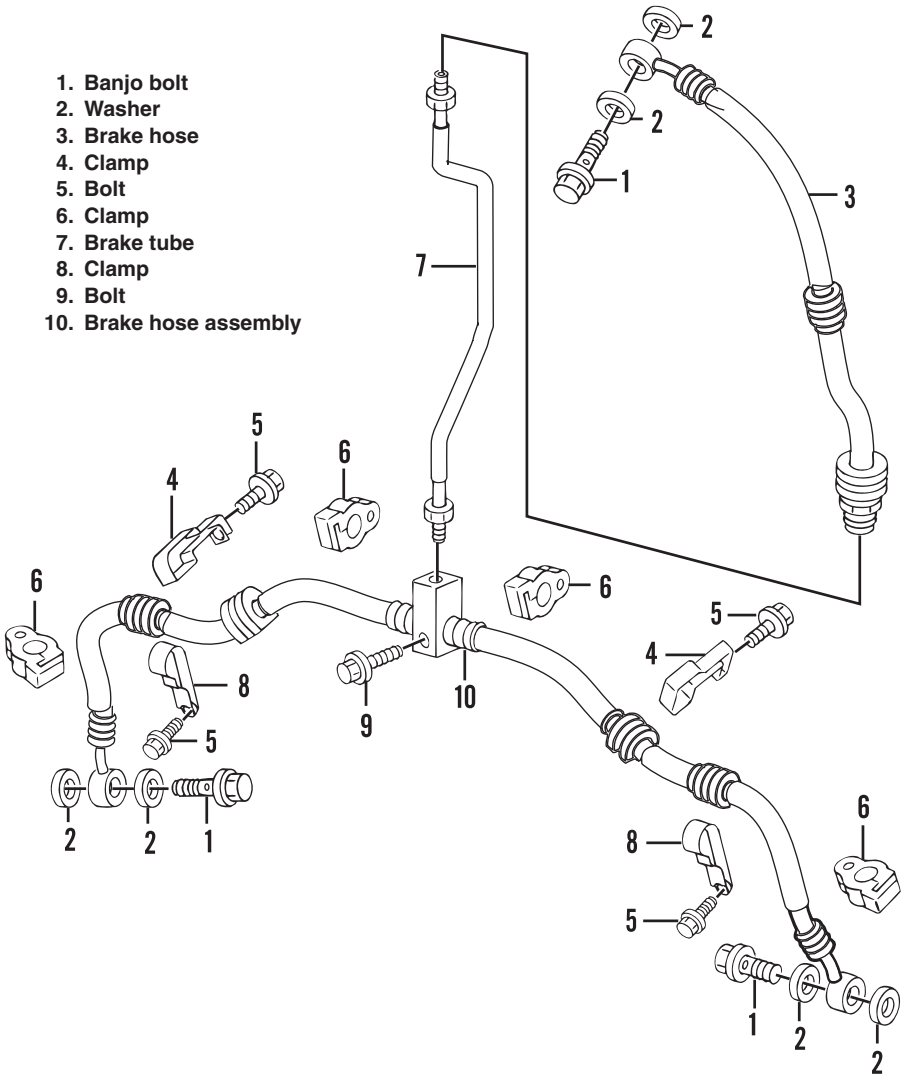
FRONT BRAKE HOSES



7. Install the new bearings as follows:

   a. Install both bearings with a bearing driver placed on the outer bearing race. Use a press or drive the bearings into the mounting bore. Make sure each bearing turns smoothly after installing it.

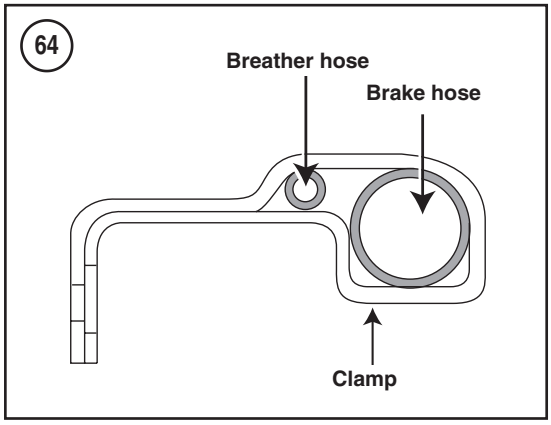
   b. Install the outer bearing (2, **Figure 62**) so its sealed side faces toward the brake shoes. Install the outer bearing until it bottoms in the mounting bore.

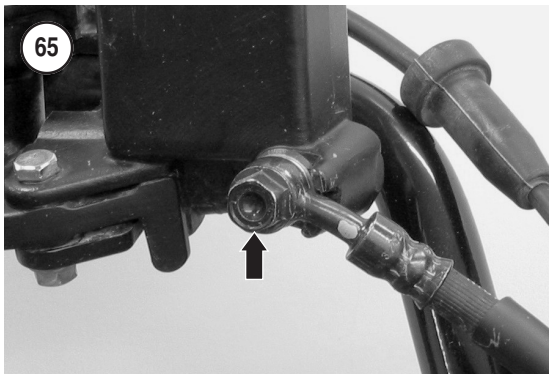
   c. Install the inner bearing so its sealed side faces toward the snap ring and dust seal. Install the inner bearing until it bottoms against the outer bearing and the snap ring groove is accessible.

   d. Install the snap ring into the mounting bore groove. Make sure the snap ring seats in the groove completely.

8. Install the new dust seal (5, **Figure 62**) as follows:

   a. Pack the new dust seal lip with grease.



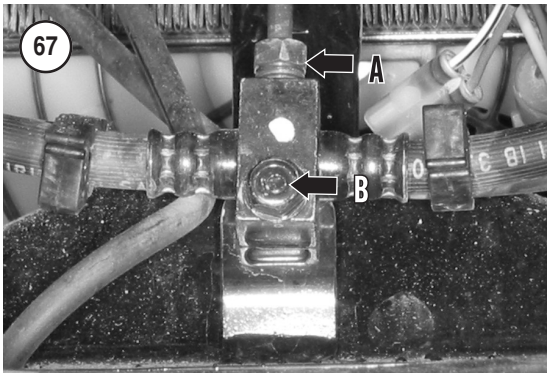


b. Align the dust seal with the mounting bore so its closed side (A, **Figure 59**) faces out.

c. Tap the dust seal into place until it seats against the snap ring.

FRONT BRAKE HOSE REPLACEMENT

The upper brake hose can be replaced separately from the lower brake hoses. The lower brake hoses must be replaced as an assembly with the three-way joint (**Figure 63**).



1. Remove the front fender (Chapter Fifteen).
2. Remove both front wheels (Chapter Ten).
3. Note the path and attachment points for the brake hoses. Note that the clamps secure both the brake hoses and the breather hoses (**Figure 64**, typical).
4. Drain the front brake fluid as described in this chapter. Because air has entered the brake lines, not all of the brake fluid will drain out.

NOTE
Because some residual brake fluid will remain in the lines, be careful when disconnecting and removing the brake hoses in the following steps.

5. To remove the upper brake hose, remove the banjo bolt and sealing washers from the brake master cylinder (**Figure 65**). Unscrew the lower end of the brake hose from the brake tube and remove the brake hose.
6. Remove the lower brake hose assembly as follows:
   a. Remove the banjo bolt and sealing washers (**Figure 66**) at the back of a wheel cylinder. Hold the open hose end in a container to catch any residual brake fluid. Repeat for the other side.
   b. Unscrew the lower end of the brake tube from the three-way fitting (A, **Figure 67**)
   c. Remove the bolt securing the three-way fitting to the frame (B, **Figure 67**).
   d. Remove the lower brake hose assembly.
7. Install new brake hose(s) in the reverse order of removal. Install new sealing washers.
8. Tighten the banjo bolts to 34 N•m (25 ft.-lb.).